

Changkat Changi Secondary School
Physics Department
Upper Secondary

Name: _____ () Class: _____ Date: _____

TOPIC : Measurement

WORKSHEET 1.1

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1. A physical quantity is a quantity that can be measured and consists of _____ and _____. An example of a physical quantity is _____. [2]
2. Name the six basic physical quantities you have learnt and state the S.I. units for them. The first one is done as example. [3]

Name of physical Quantity	Name of unit	Symbol
Length	metre	m

3. Derived physical quantities are used to express quantities which are very _____ or very _____. [1]
4. In the table below, identify the name of the derived physical quantity. [2]

Derived Physical Quantities	Derived SI Units
	m/s
	kg/ m ³
	m ³
	m ³ / s
	m ²

5. Prefixes are commonly used to express smaller or larger quantities. Complete the table below with some commonly used S.I. prefixes. [6]

Prefix	Symbol	Factor
nano		
micro		
		10^{-3}
	K	
	M	
	G	

6. Convert the following quantities to their base units and to standard form in terms of base units. The first one is done for you. [5]

Quantities with prefixes	Base units	Base units in standard form
(a) 5 kg	5000 g	$5 \times 10^3 \text{ g}$
(b) 4.2 kJ		
(c) 100 cm		
(d) 10 μm		
(e) 200 ms		
(f) 98.7 Mhz		

- (a) 5 kg—rice bag? Washing powder
- (b) 4.2 kJ—1 calorie conversion
- (c) 100 cm – 1 metre
- (c) 10 μm – diameter of hair
- (d) 200 ms—average human reaction time
- (e) 98.7 Mhz—radio station